DOCUMENT RESUME

ED 042 697 24 SP 004 118

AUTHOR	Johnson, Charles E.; Shearron, Gilbert F.
TITLE	A Summary of the Feasibility of the Georgia Educational Model for Teacher Preparation--Elementary, With Conclusions. GEM Bulletin 69-28.
INSTITUTION	Georgia Univ., Athens. Coll. of Education.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C. Bureau of Research.
BUREAU NO	BR-9-0477
PUB DATE	70
CONTRACT	OEC-09-200477-4043
NOTE	13p.
EDRS PRICE	EDRS Price MF-$0.25 HC-$0.75
DESCRIPTORS	Elementary School Teachers, Estimated Costs, *Feasibility Studies, *Models, Program Development, *Teacher Education
IDENTIFIERS	CETEM, *Comprehensive Elementary Teacher Education Models

ABSTRACT

This document summarizes the report of an investigation (SP 004 171) which established the feasibility of developing and operating the Georgia model program for the preparation of elementary school teachers (ED 025 491). The three objectives are listed: to determine feasibility of the model in projected sustained operation, to develop a strategy for implementation, and to provide cost estimates for development and implementation. Procedures for the investigation are outlined: selection, orientation, and training of staff; examination of the theoretical, technical, and socio-psychological feasibility of each component; etc. The 5-year strategy for development and implementation is described briefly--a six-stage plan of sequential induction of instructional phases leading from preparation and planning of the preprofessional phase to sustained operation of all three phases (preprofessional, professional, and specialist) by July 1975. Estimated costs are summarized (e.g., $18,370,000 for the entire 5 years of program development and operation and $4,035 for each of 1200 students during the first year of sustained operation.) Estimated costs are also compared to costs of continuing the present program (at the University of Georgia). The conclusions, 30 generalized findings which summarize the highlights of the feasibility study, are listed under the same headings used to describe the model program subsystems: Development, Instruction, Evaluation, Management, and Cost. (JS)

JUN 27 1970

GEORGIA EDUCATIONAL MODELS

University of Georgia

Athens, Georgia

ED042697

A SUMMARY OF THE FEASIBILITY
THE GEORGIA EDUCATIONAL MODEL FOR
TEACHER PREPARATION--ELEMENTARY
WITH CONCLUSIONS

U.S. DE
THIS D
EXACTL
ORGANI
VIEW O
SARILY
CATION

SP004118

ASE

ED042697

GEORGIA EDUCATIONAL MODELS
The University of Georgia
College of Education
Athens, Georgia 30601

A SUMMARY OF THE FEASIBILITY OF THE GEORGIA EDUCATIONAL MODEL FOR TEACHER PREPARATION--ELEMENTARY WITH CONCLUSIONS

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

GEM Bulletin 69-28

Charles E. Johnson, Ed. D.
Gilbert F. Shearron, Ed. D.

1969

Note: This bulletin reports one of a series of investigations designed to develop, evaluate and implement a model teacher education program for the preparation of elementary teachers. This report was prepared pursuant to a contract with the Office of Education, U.S. Department of Health, Education and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy. This bulletin may not be reproduced without permission.

SP004118

Chapter VIII

Summary and Conclusions

C. E. Johnson and G. F. Shearron

This is a report of an investigation which sought to determine the feasibility of developing and operating the Georgia model program for the preparation of elementary school teachers.

Objectives

The objectives of this study are: (a) to establish the feasibility of the teacher education program model in projected sustained operation, (b) to provide a strategy to implement the educational program model into sustained operation, and (c) to provide cost estimates for the development and operation of the instructional program with attention to alternate paths based on limited resources.

This investigation also provides a product which is likely to be of greater value to professional education than the findings of the study itself. It is a system, more efficient than any now in existence, designed to develop and maintain exemplary educational programs.

Procedure

The investigation began with the selection, orientation and training of new staff members for their work assignments. Next, a critical examination was made of the original instructional model as it reflected sustained operation to be certain that all details of the design were filled in and to identify those features which should be investigated for feasibility. When the design was completed investigation of the technical and socio-psychological feasibility of each component was undertaken and validated where necessary. In some instances this led to the modification and/or redesigning of the specifications for the sustained operation of the model. That is to say, in order to establish feasibility within reasonable limits of confidence, it was necessary to modify some of the original specifications. Any changes that were made in the specifications necessitated re-examination of the system to determine whether these

changes demanded revision in other components of the design. If so, revision followed by additional re-examination occured.

When the investigators were satifsied that the model was theoretically, technically, and socio-psychologically feasibile and that all systems appeared to be compatible and consistent with the basic intent of the operation, a PERT chart diagram of the systems network of the instructional program in sustained operation was designed. For each activity detailed time and cost requirements (personnel, facilities, materials, etc.)were attached. Utilizing IBM PMS/360 computer programs the data were fed and stored.

Investigation of cost feasibility for the model instructional program in sustained operation was then begun. The primary criterion for determining cost feasibility was that the per student cost for instruction in the model program should be reasonable for an institution to maintain without supplementary financial assistance. Finally, an exploration was made of the cost for various possible modifications (reductions of the instructional program in sustained operation in relation to limited available funds).

Concurrently with determining the feasibility of the model program in sustained operation the investigators designed a detailed and effective strategy which would implement the instructional program into sustained operation in a period of five years. This activity required the involvement of consultants and other specialists with expertise in designing strategies and engineering designs in such fields as industry, military operations, space technology and sociology. When the conceptual model for this strategy was completed, detailed activities were designed and a PERT chart diagram for the strategy was prepared. Next, time estimates were assigned to each activity and, again utilizing IBM PMS/360 computer programs, the time data were fed to determine the extent to which time estimates were such that the strategy could accomplish the mission within the five year period. Some adjustments were found necessary and were made.

When investigators were satisfied that the strategy was sound and the mission could be accomplished within the five year limit, cost estimates for personnel, facilities,

equipment, travel, technology, materials, etc. were attached to each activity in the strategy and computer stored. Costs were then retrieved for purposes or reporting and an examination was made of the cost of developing and implementing the model program into operation. Finally various reasonable modifications (reductions) of the model based on limited available funds were considered.

Strategy for Development and Implementation

The specifications for the development strategy require the application of research and development procedural principles providing for flexibility in management of time. However, this flexibility is within a framework of defined limits. For example, the starting date for the project is assumed to be July 1, 1970. The period of funding by a contractor is limited to five years. Because of these limitations the strategy is designed so that all components of all phases of the instructional program have been developed and piloted by July 1, 1975.

The concept of sequential induction of instructional phases was fundamental to the strategy for the development of the model program. This concept requires that the instructional program be built and implemented from the point of initial student entry and that the learning activities be developed sequentially through to the highest level of proficiency required by the specifications of teacher performance. This means that attention is first given to the development of the preprofessional phase, next to the professional phase and finally to the specialist phase. Furthermore, it means that when sustained operation occurs it will occur first with a preprofessional phase, followed next with the professional and finally with the specialist phase. Thus, the attainment of the condition where all phases of the instructional program are in sustained operation is not complete until the specialist phase leaves its final stage of development.

There are six stages for development leading from preparation and planning of the preprofessional phase to sustained operation. Stage 1 provides for preliminary planning with special attention being given to the preprofessional phase of the instructional program. Stage 2 begins and ends

the development of the preprofessional phase and provides for the planning and designing of the professional phase. During stage 3 the preprofessional phase is piloted, the professional phase is developed and the planning and designing of the specialist phase is completed. During stage 4 the preprofessional phase is tested in initial full-scale operation. At this same time the professional program is piloted and the specialist phase is developed. In stage 5 the preprofessional program begins sustained operation while the professional phase is being tested in initial operation and the specialist phase is piloted. During stage 6 the professional phase joins the preprofessional phase in sustained operation and the specialist phase engages in initial operation. At the end of stage 6 all three phases of the instructional program are in sustained operation and the mission is thus completed.

Application of the principle of sequential induction combined with specifications related to individualized instruction and accompanied by the feature of staggered registration creates particular scheduling concerns which cause all stages to overlap.

Estimated Costs

The overall cost for the fiscal years beginning July 1, 1970, and extending through June 30, 1976 for both development and operation of the Georgia educational model for the preparation of elementary school teachers is estimated at $18,370,000, not inclusive of facilities. Of this total $12,499,500 is required for program development (project activities) and $5,880,500 is required for sustained operation (maintaining instructional program activities). During the first fiscal year the development costs are relatively low ($683,000), during the second and third years they rise sharply ($2,581,500 and $4,484,500 respectively), and in the remaining two years they gradually diminish. ($3,465,000 and $1,275,000 respectively). In general the highest costs for development are for key personnel to develop and pilot the instructional materials (PMs) and to prepare the evaluation instruments.

In 1976, when all phases of the instructional program have been developed, piloted and passed through the initial

period of operation, it is estimated that the cost per year for sustained operation will be $4,841,500. Assuming a total population of 1200 students distributed throughout the three phases of the instructional program the average per student cost per year may be estimated as $4,035, yielding a per student cost per month of $336.

Since the student population varies from phase to phase and year to year, and since the cost for instruction is greatest at the graduate level and declines in the direction of first year students, a special investigation was made to estimate the per student cost per month during each phase of sustained operation of the model program. These costs were then compared with what the estimated cost of the current program at the University of Georgia would be at the same time. In 1974 the per student cost per month for students in the preprofessional phase of the model program is estimated to be $213, whereas the student cost per month of the current program at the University of Georgia if extended to that date would be $274 (this includes a 3% per year increase for inflation). In 1975 the per student cost per month for students in the professional phase of the model program is estimated to be $339. At that same time the per student cost per month for the current program at the University of Georgia if extended to that date would be $339. In 1976 the per student cost per month for students in the specialist or inservice phase of the model program is estimated to be $491. Because of the dearth of data on the 5th and 6th year elementary education programs no sound estimate of the per student cost per month for graduate students could be obtained. Thus, no comparative figures for this category are available.

Estimating per student cost per month for development is dependent upon the assumed period of sustained operation during which students would be affected by the model program and upon the number of students which would be affected. Because of the self-improvement or regenerative nature of the model it was estimated that the life of the program would be at least 20 years, and because of provisions for coalitions and dissemination it was estimated that over the 20 year period approximately 137,000 students would be affected. Calculations based on these assumptions yielded an estimated development cost of $1.50 per student per month.

The total cost for facilities for the fiscal years beginning July 1, 1970, and extending through June 30, 1976, for both development and operation of the educational model is $881,000. This total includes all required facilities (classrooms, lecture halls, libraries, tables, desks, laboratories, television facilities, etc.). The activities associated with development and piloting phases account for approximately $685,000 of the total cost for facilities during sustained operation and approximately $87,000 for 1975 or approximately the same as cost would be were the present program continued.

Conclusions Regarding Feasibility

The following conclusions, drawn from this investigation, are presented as generalized findings which summarize the highlights of the study as regards to the feasibility of developing and implementing the Georgia model for the preparation of elementary school teachers. These generalizations are classified and reported under the same headings used to describe the subsystems of the model program in sustained operation and are taken primarily from Chapters IV through VII of this report.

The reader must keep in mind that these conclusions are based on an investigation made primarily on conditions and facilities peculiar to the State of Georgia on the assumption that similar conditions and facilities are available or can be acquired in other localities.

Development

Underlying the specifications for the educational model is an assumption that in a period of approximately five years, it is feasibile to develop and to implement an instructional program representative of the model and that once implemented it can be maintained in sustained operation. This study presents such a strategy for which, on the basis of the judgment of specialists in systems design and management, is regarded as feasible provided necessary funds are made available.

Instruction

1. Teacher performance behaviors can be so classified and organized as to serve as a core or basic source for the development and operation of a model teacher education program.

2. Students learn more effectively and efficiently through the use of PMs than through more conventional means of organizing, sequencing and presenting learning activities.

3. Students enthusiastically endorse the instructional program of the model in all its various aspects.

4. The management and scheduling of the instructional activities of the model program can be achieved through the use of currently available computer equipment. Also, computer programs can be designed to meet these scheduling needs.

5. Equipment for computer assisted instruction (CAI) is available, but there is a dearth of appropriate instructional programs available to warrant large scale use of CAI in the initial stages of the operation of the model program.

6. PMs are so designed that they provide for the use of available CAI instructional programs and can be easily adjusted to accommodate more such programs when they become available.

7. Learning activities for PMs can be so designed that students acquire target skills and attitudes as well as the intended subject matter.

8. Provision can be made for learning laboratories which contain the majority of the tools and materials needed for undertaking the PM activities in selected areas of learning.

9. A large number of staff members in all affected colleges and departments of the University endorse the principle of individualized instruction through the use of PMs, are willing to receive in-service

training to prepare themselves for the task, and are capable and willing to proceed with the task provided working conditions are reasonable and that they work in teams.

10. Specifications for extended student practicuum experiences can be accommodated. Also, there are school districts which have exemplary elementary school programs willing and able to serve as portal schools.

Evaluation

1. The teacher performance behaviors which form the core of the model program can be evaluated and the competency levels of the teachers in relation to these specified behaviors can be determined.

2. The specifications of the evaluation program which provide for student self-evaluation accompanied by immediate verification can be implemented and will facilitate effective learning and conserve learning time.

3. The evaluation procedures of the model program which delineate and specify particular levels of attainment for teacher performance are strongly supported as desirable by students in teacher education.

4. There are qualified personnel, computers, and computer programs available to conduct the data processing procedures specified for the model program.

5. Student selection and performance evaluation devices are available to satisfy the majority of the objectives of the evaluation subsystem. Devices for the evaluation of certain affective behaviors can be developed.

6. Evaluation specialists and supportive personnel can be oriented and trained so that they possess the special skills needed for the efficient and

effective functioning of the evaluative subsystem of the model program. Also, their performances can be evaluated.

7. Specifications which call for the constant evaluation, feedback and self-renewal processes designed to provide the regeneration necessary for maintaining the model program in dynamic existence may be met to a large extent with devices, techniques and resources currently available. Those not currently available can be developed.

8. There is a sufficient pool of persons eligible for consideration for admission to the model program that those selected will have high probability of success in completing at least the requirements of the professional phase of the program.

9. Student personnel services of the model program (i.e. orientation, periodic progress reviews, career advisement, clinical services, etc.) can be implemented and provide a supportive system for the instructional subsystem of the instructional program.

10. The evaluation subsystem has the capability of systematically assessing the management of all project operations. The computers, computer programs, other equipment and trained personnel can be made available to implement these procedures.

Management

1. The specifications of the model program which call for the extensive use of modern management technology in carrying out project operations can be implemented in institutions of higher learning with effectiveness.

2. Specifications which call for institutional changes in policies and practices (abolishment of grade point system, semester and quarter; institution of the calendar year for the academic year; substitution of individualized instruction for required class attendance; accrediation, etc.) can be satisfied.

3. Adequate provisions have been made in the designing of the program for students desiring to transfer into or out of the instructional sequence.

4. Existing computers will adequately care for the intricate scheduling and other management needs of all subsystems of the model program, and computer technology can produce programs which will accomplish the scheduling objectives.

5. The specifications which require that professional educational organizations participate cooperatively with institutions of higher learning in the development of the model program as well as in its operation were found to be reasonable and enthusiastically endorsed by all concerned.

6. The model program requires personnel with skills not normally required in program development and implementation in higher education. Personnel with some of the special abilities are already available and others can be trained.

7. Coalitions between developing institutions and public school districts required for successful operation of the model program can be arranged. The notion of such alliances is met with enthusiastic endorsement with implied commitment by both groups of educators.

Cost

1. The per student cost for maintaining the model program in sustained operation is the same or less than the per student cost for maintaining the present teacher education program for elementary school teachers.

2. Provided there are available funds for development, the per student cost for development of the entire three phase program is sufficiently low in comparison to the assumed cost benefits to be acquired to warrant undertaking the entire development project.

3. If only limited funds are available for program development there are other reasonable paths of action which would maintain the basic structures and specifications of the model but would require less cost. These include: (a) the development and operation of the preprofessional and professional phases without provision for the specialist or inservice phase, (b) the development of the professional and specialist phases without provision for the preprofessional, (c) the development and operation of either the preprofessional or the professional phases without provision for the other two, (d) the development and operation of all, two or only one of the phases of the program with a reduction in the number of alternative learning activities provided in the PMs, and (e) the development and operation of all three, two or only one of the phases of the program but over a longer period of time utilizing volunteer assistance of both staff and students.

A Closing Note

In interpreting these conclusions the reader must be fully aware that their validity is based on numerous assumptions. For examples; the total number of students accounted for by the computer model is 1,200, the assumed inflation rate for the next six years is estimated at 3% per year, the salaries for key and supportive personnel were estimated on the basis of a university level operation, and the facilities were estimated on the costs of facilities representative for a new structure. Any institution seriously considering developing and operating an instructional program representative of the Georgia model must adjust costs to local condition. This report and the reference volumes which accompany it provide a systematic procedure and cost data for undertaking such an adjustment.

Special attention in undertaking any feasibility project based on this one should be given to the fact that in general this study assumed that the operations, facilities, and policies of the university system of Georgia and especially the University of Georgia were reasonably typical of conditions in other localities.

The key note of feasibility is the extent to which institutions of higher learning are willing and able to change their policies and practices. Commitment such as that provided by the President of the University of Georgia in the preface of this report is the foundation for institutional change.

OM
PP PHASE
PE PHASE
PO PHASE